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Numerical study of the three-degreed parametrically excited gyroscopic system

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Abstract

© Published under licence by IOP Publishing Ltd.A mathematical model of the rotor vibratory gyroscope was constructed. The operating principle of the device based on the use of the tuned resonance of three-degreed oscillating system. Parametric excitation of a gyroscope is achieved by modulating the angular velocity of rotation of the rotor. The results of numerical calculations allow not only to illustrate the process of operation of the gyroscope, but also to find the values of the parameters under which it can be used as a device of orientation of moving objects.

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